

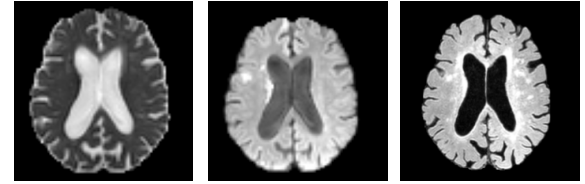
## Segmentation

**Goal:** Automatically generate stroke lesion segmentation masks from multimodal MRI images.

**Input:** DWI, ADC, FLAIR Images.

**Output:** Binary segmentation mask delineating ischemic stroke lesions

**Metrics:** Dice, Precision, Recall, F1, HD95, AVD



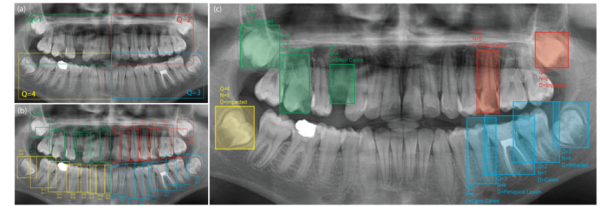
## Detection

**Goal:** Automatically Quadrant Detection (Q), Tooth Enumeration (N), Diagnosis Classification (D).

**Input:** DWI, ADC, FLAIR Images.

**Output:** Bounding boxes around abnormal teeth labeled with Q,N, D

**Metrics:** AP, AP50,AP75 (Q,N,D)



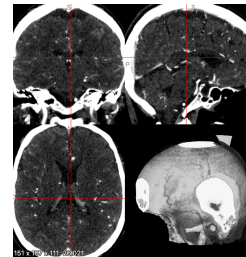
## Classification

**Goal:** Classify topological edges in the Circle of Willis graph on CTA images.

**Input:** 3D CTA volume in NIfTI format.

**Output:** JSON file with anterior/posterior edge classifications.

**Metrics:** anterior ACC, posterior ACC



anterior:	posterior:
L-A1: 1,	L-Pcom: 0,
Acom: 1,	L-P1: 1,
3rd-A2: 0,	R-P1: 1,
R-A1: 1,	R-Pcom: 0

## Image Quality & Enhancement

**Goal:** Automatically reconstruct high-quality images from low-quality handheld device images.

**Input:** Low-quality Ultrasound Images.

**Output:** High-quality Ultrasound Images.

**Metrics:** LNCC, SSIM, PSNR

